

CLAIMS

What is claimed is:

- 10 1. A method to use a perforating gun for use in oil and natural gas wells having a casing, comprising the steps of:
- a. loading a perforating gun with a loading tube having an explosive charge wherein the perforating gun comprises a first layer slidable, non fixedly, and removeably disposed over the loading tube and at least one outer layer in fixed engagement over the first layer forming a laminate with a first end and a second end; and wherein said outer layer is a solid structure with scallop openings disposed therein and said scallops are positioned in the solid structure in a defined pattern;
- 15 b. suspending the loaded perforating gun in a well bore with a well casing;
- c. detonating the explosive charge in the gun;
- d. permitting a gas jet to pierce the first layer and outer layer of the gun;
- 20 e. permitting the gas jet to further pierce the well casing and enter strata surrounding the well bore; and
- f. fracturing the strata.
- 25 2. The method of claim 1, wherein the gun has a longitudinal axis parallel to the sides of the well bore.
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- 5 3. The method of claim 1, further comprising the step after detonation of the gun, extracting the gun from the well bore, cutting off the first and second ends to be reused on another gun, and recycling the remainder of the gun.
- 10 4. A method to use a perforating gun for use in oil and natural gas wells having a casing, comprising the steps of:
- 15 a. loading a perforating gun with a loading tube having an explosive charge wherein the perforating gun comprises: a first layer slidable, non fixedly and removeably disposed over the loading tube and at least one outer wire layer wound over the first layer and wherein said outer layer is wire;
- 20 b. suspending the loaded perforating gun in a well bore with a well casing;
- 25 c. detonating the explosive charge in the gun;
- 30 d. permitting a gas jet to pierce the first layer and outer layer of the gun;
- 35 e. permitting the gas jet to further pierce the well casing and enter strata surrounding the well bore; and
- 40 f. fracturing the strata.
- 45 5. The method of claim 4, wherein the gun has a longitudinal axis parallel to the sides of the well bore.
- 50 6. The method of claim 4, further comprising the step after detonation of the gun, extracting the gun from the well bore, cutting off the first and second ends to be reused on another gun, and recycling the remainder of the gun.